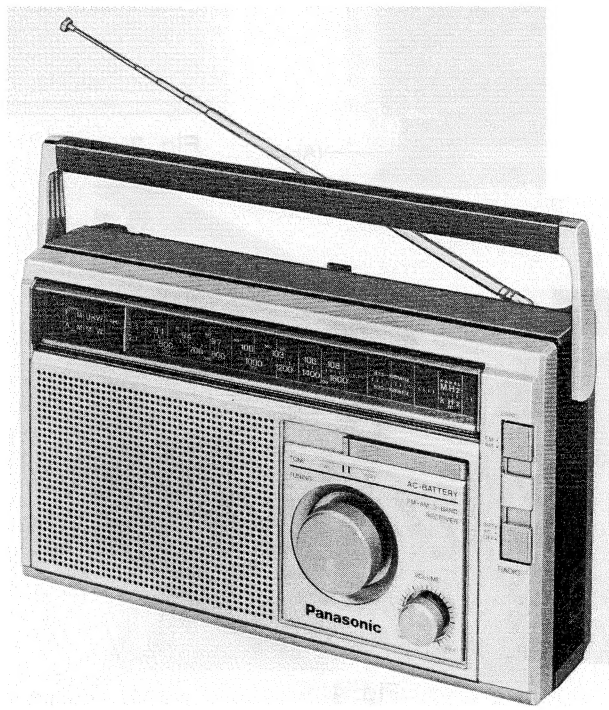
ORDER NO. RD83035342C2

Service Manual

Radio

RF-568BS

FM-AM PORTABLE RADIO



■ SPECIFICATIONS

General:

Power Requirement:	AC; 220 V 50/60 Hz Battery; 6 V (Four "AA" Size Batteries) (National UM-3 or equivalent)
Power Consumption:	4 W (AC only)
Power Output:	600 mW...RMS (max.)
Speaker:	9 cm ($3^1/_2$") PM Dynamic Speaker (8Ω)
Output:	Earphone/EXT SP; 8Ω
Dimensions:	265 mm(W)×149 mm(H)×90 mm(D) ($10^3/_8$"×$5^7/_8$"×$3^1/_2$")
Weight:	820 g (1 lb. 12.9 oz.) without batteries

Radio Section:

Radio Frequency Range:	FM; 87.5~108 MHz AM; 520~1610 kHz (577~186 m)
Intermediate Frequency:	FM; 10.7 MHz AM; 455 kHz
Sensitivity:	FM; 4μV/50 mW output AM; 32μV/m/50 mW output

Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

DISASSEMBLY INSTRUCTIONS

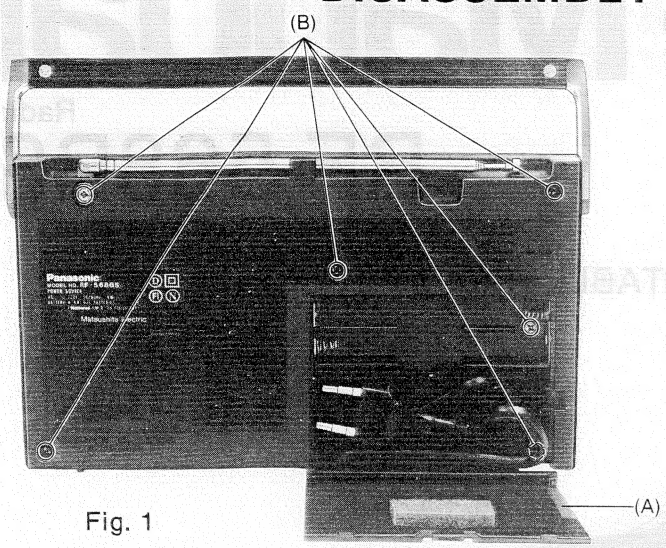


Fig. 1

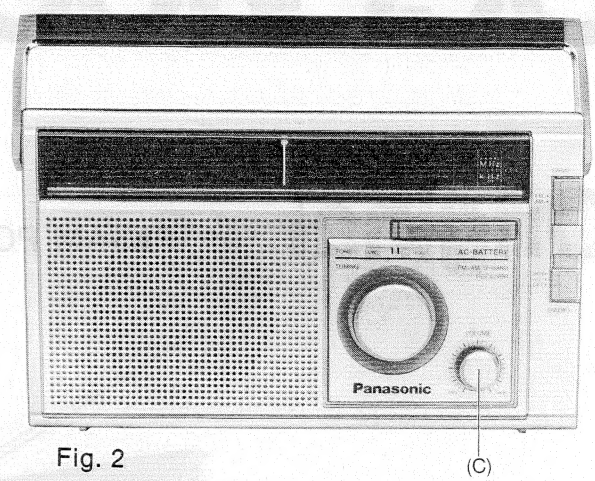


Fig. 2

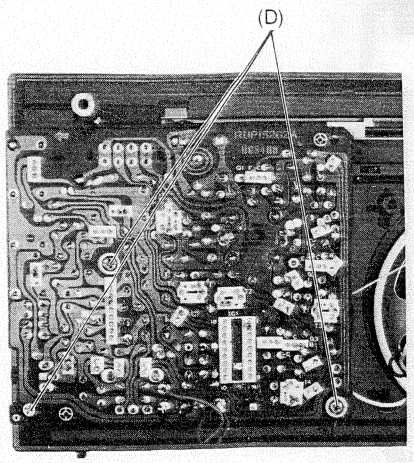


Fig. 3

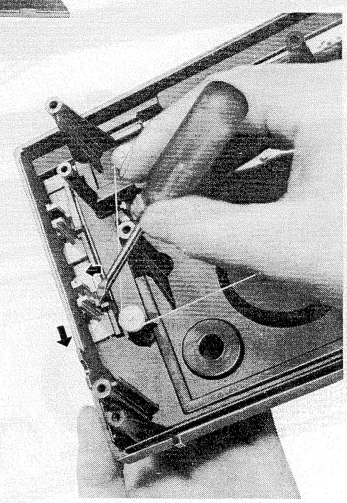


Fig. 4

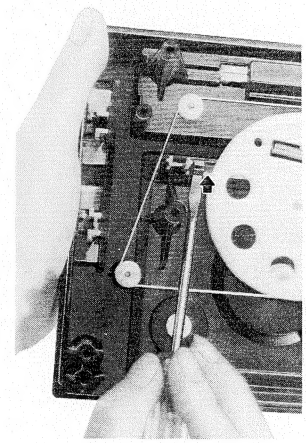


Fig. 5

Procedure	To remove —.	Remove —.	Shown in Fig. —.
1	Rear Cabinet Ass'y	Battery Cover .....(A)	1
2		Screw (3×25) .....(B)×6	
3	Printed Circuit Board	Knob .....(C)×1	2
4		Screw (3×12) .....(D)×3	3
5	Radio and Band Switch Buttons.	Pull the Switch Button downward while depressing the rib with a driver.	4
6	Tone Switch Knob	Depress the rib downward with a driver.	5

■ DIAL THREADING

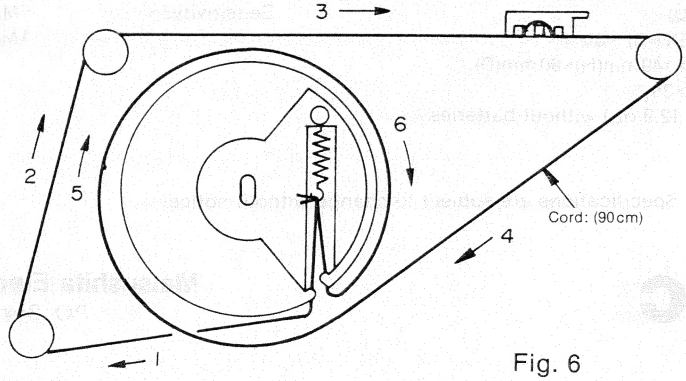


Fig. 6

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set tone switch to High. 2. Set volume control to maximum. 3. Set band switch to AM or FM.	4. Set radio switch to BATT. 5. Output of signal generator should be no higher than necessary to obtain an output reading. 6. Set power source voltage DC 6V.

■ AM AND FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ALIGNMENT					
(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz 30% Mod. at 400Hz	Point of non-interference.	Output meter across voice coil.	T1 (AM 1st IFT) T2 (AM 2nd IFT)	Adjust for maximum output.
		AM-RF ALIGNMENT					
(2)	AM	〃	550kHz	550kHz	Output meter across voice coil.	L4 (AM OSC Coil) L3 (AM ANT Coil) (*1)	Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
(3)	AM	〃	1,500kHz	1,500kHz	〃	CT3 (AM OSC Trimmer) CT4 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
	(*1) Cement antenna bobbin with wax after completing alignment.						
		FM-IF ALIGNMENT					
(4)	FM	Connect to test point ③ through 0.001μF. Negative side to test point ②.	10.7MHz (SWP)	Point of non-interference.	Connect vert. amp of scope to test point ⑤. Negative side to test point ②.	T3 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to Fig. 8.)
(5)	FM	〃	〃	〃	〃	T4 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to Fig. 9.)
		FM-RF ALIGNMENT					
(6)	FM	Connect to test point ① through dummy antenna. Negative side to test point ②.	90MHz	90MHz	Output meter across voice coil.	L7 (FM OSC Coil) L5 (FM ANT Coil)	(*2) Adjust for maximum output.
(7)	FM		106MHz	106MHz	〃	CT1 (FM OSC Trimmer) CT2 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (6) and (7).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

■ ALIGNMENT POINTS

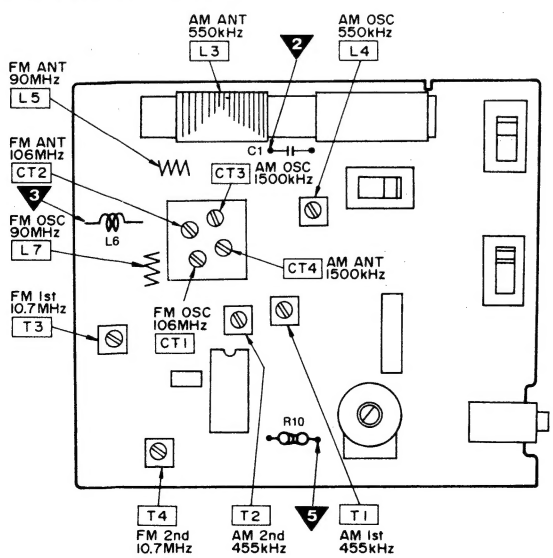


Fig. 7

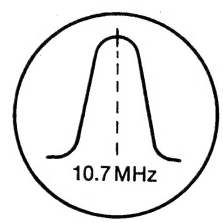


Fig. 8

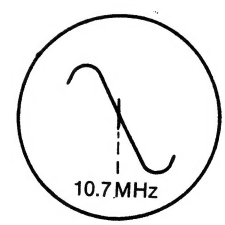
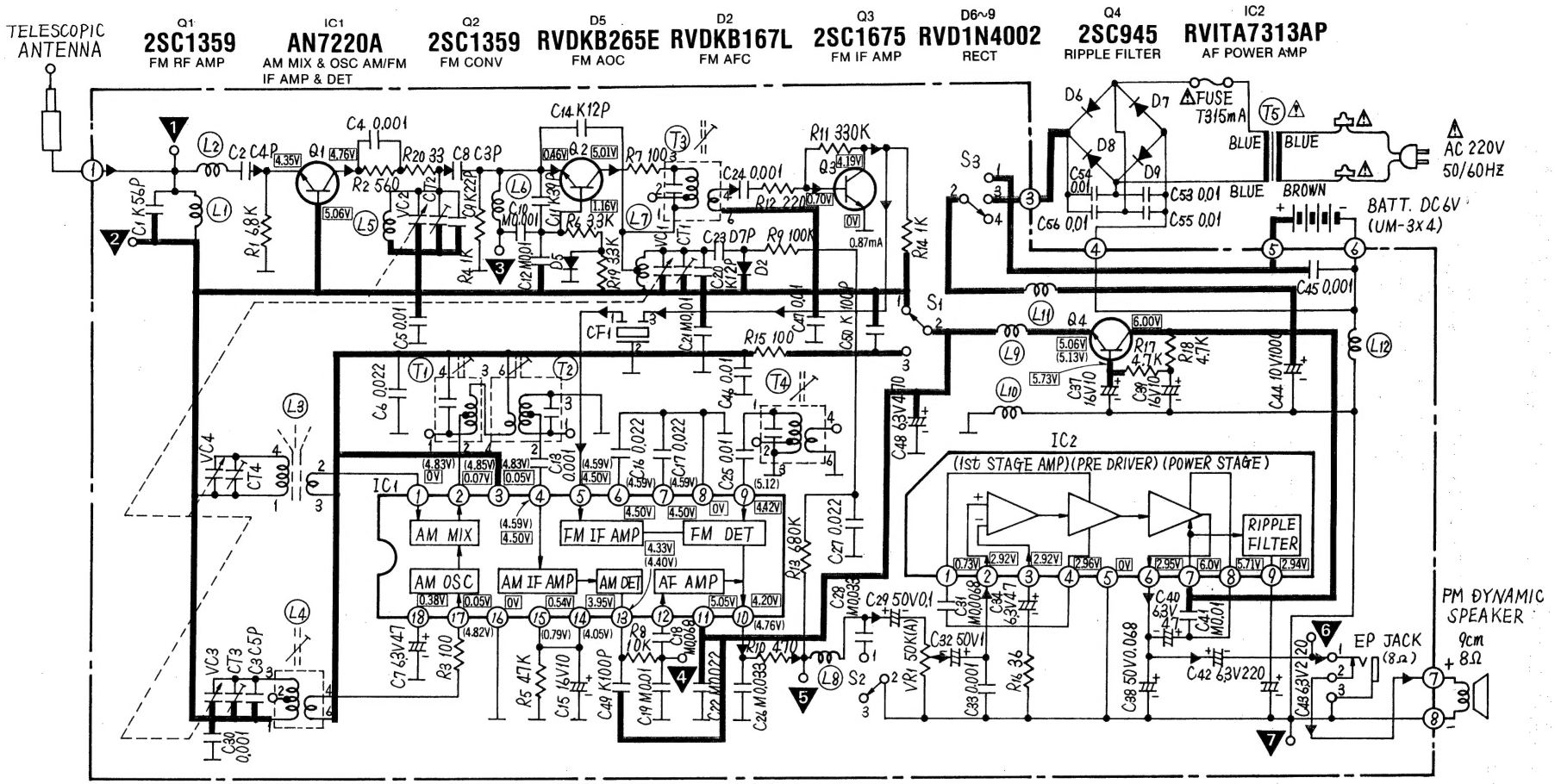


Fig. 9

SCHEMATIC DIAGRAM MODEL RF-568BS

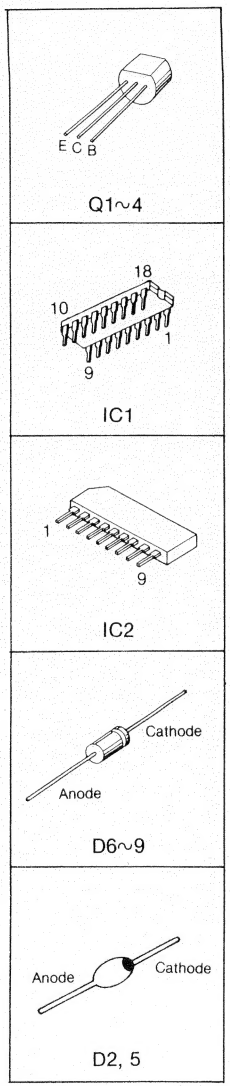


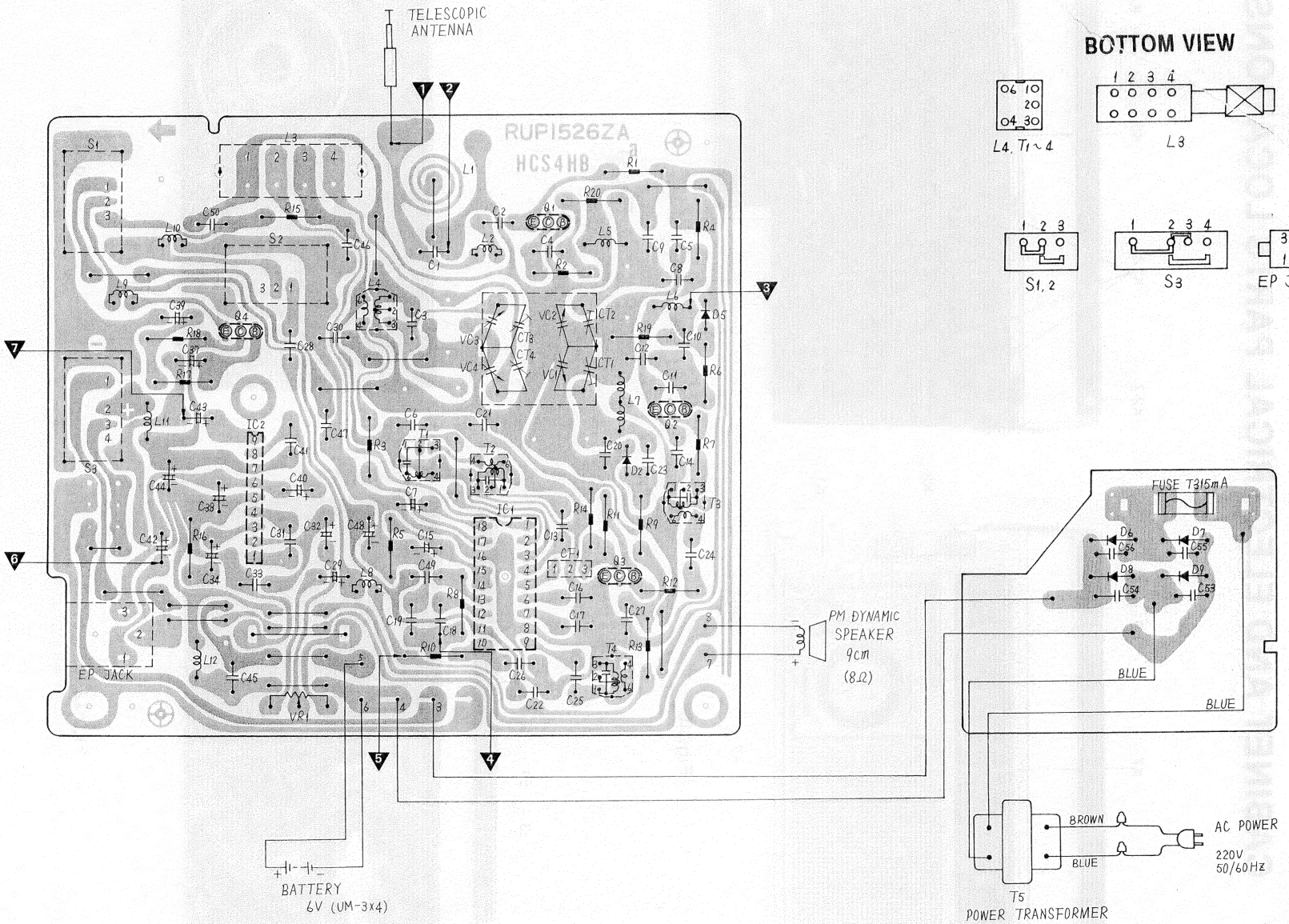
Notes:

1. S1 ..... Band switch in "FM" position. (1...FM, 3...AM).
2. S2 ..... Tone switch in "High" position. (1...LOW, 3...HIGH).
3. S3 ..... Radio switch in "OFF" position. (1...BATT, 3...AC, 4...OFF).
4. DC voltage measurements are taken with electronic voltmeter from negative terminal of battery.
   [ ]...FM position, ( )...AM position.
5. Battery current: No signal 22mA
   Maximum output 170mA
6. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

▬▬ +(B) Voltage Line.
► Radio (FM) Signal Line.

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM MODEL RF-568BS





CABINET AND ELECTRICAL PARTS LOCATIONS

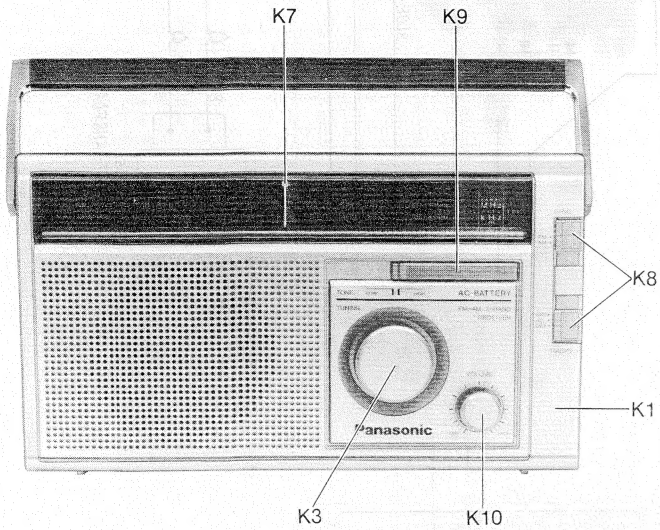


Fig. 10

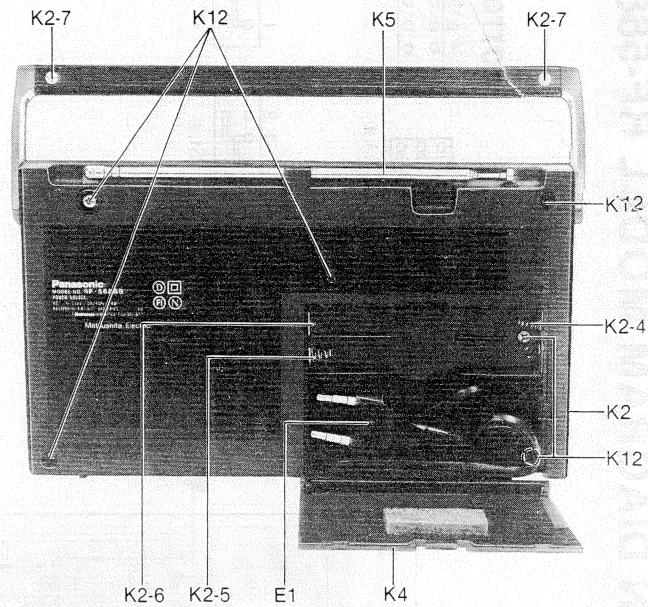


Fig. 11

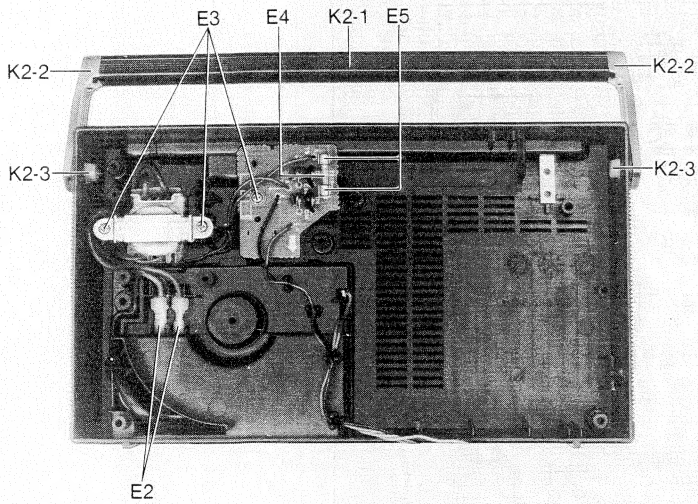


Fig. 12

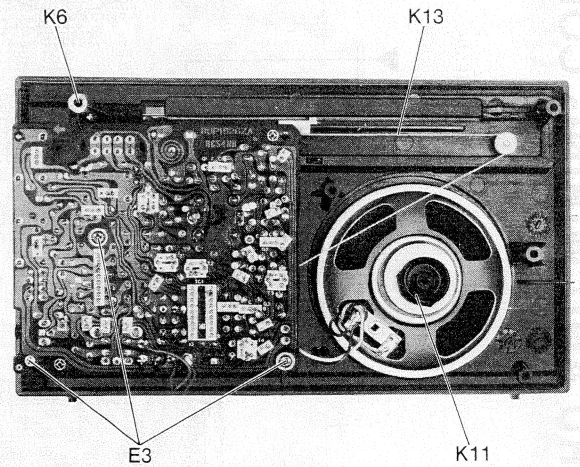


Fig. 13

■ REPLACEMENT PARTS LIST.....Model RF-568BS

(RD83035342C2)

NOTES: 1. Important safety notice.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
2. The S mark indicates service standard parts and may differ from production parts.

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
		INTEGRATED CIRCUITS, TRANSISTORS AND DIODES		
IC1	AN7220A	IC	1	
IC2	RVITA7313AP	IC	1	
Q1,2	2SC1359B	Transistor (Si)	2	S
Q3	2SC1675-L	Transistor (Si)	1	S
Q4	2SC945-Q	Transistor (Si)	1	S
D2	MA27C	Diode (Si)	1	S
D6,7,8,9	RVD1N4002	Diode (Si)	4	
D5	RVDKB265E	Diode (Si)	1	S
		COILS AND TRANSFORMERS		
L3	RLF2V154	Antenna Coil, AM	1	
L4	RLO2B105	Oscillator Coil, AM	1	
L5	RLD4Y44	Antenna Coil, FM	1	
L7	RLO4Y44	Oscillator Coil, FM	1	
T1	RLI2B216	IFT, AM 1st	1	
T2	RLI2B217	IFT, AM 2nd	1	
T3	RLI4B153	IFT, FM 1st	1	
T4	RLI4B157	IFT, FM 2nd	1	
T5	RLT5I2G1A	Power Transformer	1	⚠
		VARIABLE RESISTOR		
VR1	EVH0XAF30A54	Variable Resistor, 50kΩ (A)	1	
		VARIABLE CAPACITOR		
VC1∿4	RCV4LC2R1A	Tuning Capacitor, w/Trimmer Capacitor (CT1∿4)	1	
		CERAMIC FILTER		
CF1	RVF107NAZ	Ceramic Filter	1	
		SPEAKER		
	RAS9P11Z	Speaker, 9cm (3-1/2")	1	
		SWITCHES		
S1,2	RSS2A08Z	Switch, Band, Tone	2	
S3	RSS3A02Z	Switch, Radio	1	
		JACK		
J1	QJA0172	Jack, EXT. SP	1	
		CAPACITORS (Value is in MICRO FARADS except P.P=PICO FARADS)		
C1	ECCD1H560K	56 P 50V Ceramic	1	
C2	ECCD1H040C	4 P " "	1	
C3	ECCD1H050C	5 P " "	1	
C4	ECKD1H102ZF	0.001 50V Ceramic	1	
C5	ECKD1H103ZF	0.01 " "	1	
C6	ECKD1H223ZF	0.022 " "	1	
C7	ECEA1AS470	47 10V Electrolytic	1	S
C8	ECCD1H030C	3 P 50V Ceramic	1	
C9	ECCD1H220KC	22 P " "	1	
C10	ECKD1H102MD	0.001 " "	1	
C11	ECCD1H390K	39 P " "	1	
C12	ECKD1H103ZF	0.01 " "	1	
C13	ECKD1H102ZF	0.001 " "	1	
C14	ECCD1H120KC	12 P " "	1	
C15	ECEA1HS100	10 " Electrolytic	1	S
C16	ECKD1H223ZF	0.022 " Ceramic	1	
C17	ECFVD223MD	0.022 25V Semi-Conductor	1	
C18	ECFVD683MD	0.068 " "	1	
C19	ECKD1H103ZF	0.01 50V Ceramic	1	
C20	ECCD1H120KC	12 P " "	1	
C21	ECKD1H103MD	0.01 " "	1	
C22	ECFVD473MD	0.047 25V Semi-Conductor	1	
C23	ECCD1H070DC	7 P 50V Ceramic	1	
C24	ECKD1H102ZF	0.001 " "	1	
C25	ECKD1H103ZF	0.01 " "	1	
C26	ECFVD333MD	0.033 25V Semi-Conductor	1	
C27	ECKD1H223ZF	0.022 50V Ceramic	1	
C28	ECFVD473MD	0.047 25V Semi-Conductor	1	
C29	ECEA50ZR1	0.1 50V Electrolytic	1	S
C30	ECKD1H102ZF	0.001 " Ceramic	1	
C31	ECKD1H102MD	0.001 " "	1	
C32	ECEA50Z1	1 " Electrolytic	1	S
C33	ECKD1H102ZF	0.001 " Ceramic	1	
C34	ECEA1AS470	47 10V Electrolytic	1	S
C37	ECEA1HS100	10 50V Electrolytic	1	S
C38	ECFVD683MD	0.068 25V Semi-Conductor	1	
C39	ECEA1HS100	10 50V Electrolytic	1	S
C40	ECEA1AS470	47 10V "	1	S
C41	ECKD1H103MD	0.01 50V Ceramic	1	
C42,43	ECEA1AS221	220 10V Electrolytic	2	S
C44	ECEA1AS102	1000 " "	1	S
C45	ECKD1H102ZF	0.001 50V Ceramic	1	
C46	ECFVD223MD	0.022 25V Semi-Conductor	1	
C47	ECKD1H103ZF	0.01 50V Ceramic	1	
C48	ECEA0JS471	470 6.3V Electrolytic	1	S
C50	ECCD1H101K	100 P 50V Ceramic	1	
C53∿56	ECKD1H103ZF	0.01 50V Ceramic	4	
		RESISTORS (Value is in OHMS)		
R1	ERD25FJ682	6.8 k 1/4W Carbon	1	S
R2	ERD25FJ561	560 " "	1	S
R3	ERD25FJ101	100 " "	1	S
R4	ERD25FJ102	1 k " "	1	S
R5	ERD25FJ473	47 k " "	1	S
R6	ERD25FJ332	3.3 k " "	1	S
R7	ERD25FJ101	100 " "	1	S
R8	ERD25FJ103	10 k " "	1	S
R9	ERD25TJ104	100 k " "	1	S
R10	ERD25FJ471	470 " "	1	S
R11	ERD25TJ334	330 k " "	1	S

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R12	ERD25FJ221	220 1/4W Carbon	1	S
R13	ERD25TJ684	680 k " "	1	S
R14	ERD25FJ102	1 k " "	1	S
R15	ERD25FJ101	100 " "	1	S
R16	ERD25FJ330	33 " "	1	S
R17,18	ERD25FJ472	4.7 k " "	2	S
R19	ERD25FJ332	3.3 k " "	1	S
R20	ERD25FJ330	33 " "	1	S
		CABINET PARTS		
K1	RYMF568BSXG8	Front Cabinet Ass'y	1	
K2	RYFF568BSXG	Rear Cabinet Ass'y	1	
K2-1	RKX243Z	Handle	1	
K2-2	RKX249Z	Arm, Handle	2	
K2-3	RNW803Z	Spacer, Handle	2	
K2-4	RJC730Z	Terminal, Battery +, - Side	1	
K2-5	RJC322Z	Terminal, Battery - Side	1	
K2-6	RJC314Z	Terminal, Battery + Side	1	
K2-7	XTB3+8CFC	Screw, Handle M'tg	2	
K3	RYTF568MKSN	Tuning Knob, Ass'y	1	
K4	RYNF568MKSN	Battery Cover, Ass'y	1	
K5	XEARK162EDY	Telescopic Antenna	1	
K6	RJT514Z	Terminal, Antenna	1	
K7	RDP846Z	Pointer, Dial	1	
K8	RBD155Z	Knob, Band & Radio Switch	2	
K9	RBD156Z	Knob, Tone Switch	1	
K10	RBN579Y	Knob, Volume	1	
K11	RHG473Z	Rubber, Speaker	1	
K12	XTB3+25BFN	Screw, Cabinet M'tg	6	S
K13	RDZ05Z	Dial Cord (90cm)	1 ROLL	
		ELECTRICAL PARTS		
E1	RJA23Y	AC Power Cord (Fig.11)	1	S ⚠
E2	RHR108A	Connecting Pipe, AC Power Cord	2	⚠
E3	XTW3+12F	Screw, 3x12	6	
E4	XBA2CO3TRO	Fuse, T315mA 250V	1	⚠
E5	QTF1054	Holder,Fuse	2	⚠
		ACCESSORY		
	XEH1A1P	Earphone	1	S
		PACKING MATERIALS		
	RPK1606Z	Gift Box	1	
	RPN9414Z	Pad	1	
	XZB36X30A04	Poly Bag	1	S
		PRINTED MATERIAL		
	RQX4138Z	Instruction Book	1	

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